

ABSTRACT OF THE DISCLOSURE

A common requirement in automatic speech recognition is to recognize a set of words for any speaker without training the system for each new speaker. A speech recognition system is provided utilizing linear discriminant based phonetic similarities with inter-phonetic unit value normalization. Linear discriminant analysis is utilized using training data with both in-class and out-class sample training utterances for generating linear discriminant vectors for each of the phonetic units. The dot product of each linear discriminant vector and the time spectral pattern vectors generated from the input speech are computed. The resultant raw similarity vectors are then normalized utilizing normalization look-up tables for providing similarity vectors which are utilized by a word matcher for word recognition.